

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A piezoelectric ceramic material having a general composition of  $ABO_3$ , the piezoelectric ceramic material comprising:  
lead zirconate titanate having a perovskite lattice structure, wherein A stands for A positions in the perovskite lattice structure and B stands for B positions in the perovskite lattice structure, the lead zirconate titanate comprising at least a proportion of lead zirconate titanate of  $Pb_{1-3x/2-}$

$y/2SE_x[[\square]]\gamma_{x/2-y/2}Cu^I_y(Zr_{0.5515-z}Ti_{0.4485+z})O_3$ , wherein:

$\gamma$  is a vacancy in a crystal lattice of the lead zirconate titanate;

a value of x is from about 0.01 to about 0.04;

a value of y is from about 0 to about the value of x divided by two;

SE is a rare-earth metal selected from the group consisting of La, Nd, Sm, Gd, Tb, Dy, Ho, Er, Tu, Yb, Lu and Y,

x is determined by a valence of the rare-earth metal, and

z is selected based on the value of y such that the piezoelectric ceramic material corresponds to a morphotropic phase boundary.

2. (Previously Presented) The piezoelectric ceramic material of claim 1, wherein Cu is in the perovskite lattice structure of the piezoelectric ceramic material at least partially in the A positions.

3. (Previously Presented) The piezoelectric ceramic material of claim 1, wherein the piezoelectric ceramic material comprises  $\text{Pb}_{0.96}\text{Nd}_{0.02}\text{Cu}_{0.02}(\text{Zr}_{0.5515}\text{Ti}_{0.4485})\text{O}_3$ .

4. (Previously Presented) A method for producing a ceramic material according to claim 1, the method comprising:

preparing a materials mixture that includes copper oxide (CuO),  
performing a calcination of the materials mixture under inert conditions in a reduced atmosphere under an oxygen partial pressure at which Cu and CuO are in equilibrium and coexist to form a calcined ceramic product,  
grinding the calcined ceramic product;  
homogenizing the calcined ceramic product; and  
sintering the calcined ceramic product.

5. (Previously Presented) The method of claim 4, wherein performing the calcination of the ceramic raw materials mixture comprises performing the calcination in a moist nitrogen atmosphere.

6. (Previously Presented) A method for producing a ceramic material according to claim 1, the method comprising:

performing a calcination of a materials mixture without a copper oxide (CuO) additive is to form a piezoceramic perovskite mixed-crystal phase material;

adding copper oxide Cu<sub>2</sub>O to a slurry, wherein the copper oxide is about evenly distributed throughout the slurry;

grinding the piezoceramic perovskite mixed-crystal phase material to form a ground material;

mixing the ground material with the slurry to form a ceramic mass; and

sintering the ceramic mass under inert conditions.

7. (Previously Presented) The method of claim 6, wherein sintering the ceramic mass comprises sintering the ceramic mass in a moist nitrogen atmosphere.

8. (Previously Presented) A multilayer piezoelectric component comprising:  
a plurality of ceramic layers comprising the ceramic material of claim 1; and  
a plurality of internal electrode layers, wherein the ceramic layers and the electrode layers alternate.

9. (Previously Presented) The piezoelectric ceramic material of claim 2, wherein the Cu inserted in A positions is a monovalent, positive cation Cu<sup>+</sup>.

10. (Previously Presented) The method of claim 4, wherein sintering the calcined ceramic product comprises sintering the calcined ceramic product in a moist nitrogen atmosphere.

11. (Previously Presented) The multilayer piezoelectric component of claim 1, wherein the internal electrode layers include at least a proportion of metallic copper.

12. (Previously Presented) The multilayer piezoelectric component of claim 1, wherein a value of  $z$  is from about -0.15 to about +0.15.

13. (Previously Presented) The multilayer piezoelectric component of claim 1, wherein a value of  $z$  is from about -0.016 to about +0.0205.

14. (Canceled)